

required under paragraph (d)(2) of this section, then the Program shall, if possible, determine such information from records reflecting the types of mines operated or owned by the entity for which the claimant worked.

(f) If the information provided under paragraphs (a) and (c) of this section is inadequate to determine the time period during which the claimant was employed in each uranium mine, then the Program will, where possible, calculate such employment periods in the following manner, for purposes of calculating working level months of exposure:

(1) If records of the Social Security Administration exist that indicate the claimant's work history, the Program will estimate the period of employment by dividing the gross quarterly income by the average pay rate per hour for the claimant's occupation;

(2) If such Social Security Administration records do not exist, but other records exist that indicate that the claimant was employed in a uranium mine on the date recorded in the record, but do not indicate the period of employment, then the Program will apply the following presumptions:

(i) If the records indicate that the claimant worked at the same mine or for the same uranium mining company on two different dates at least three months apart but less than 12 months apart, then the Program will presume that the claimant was employed at the mine or for the mining company for the entire 12-month period beginning on the earlier date.

(ii) If the records indicate that the claimant worked at the same mine or for the same uranium mining company on two different dates at least one month apart but less than three months apart, then the Program will presume that the claimant was employed at the mine or for the mining company for the entire six-month period beginning on the earlier date.

(iii) If the records indicate that the claimant worked at any mine or for a uranium mining company on any date within the designated time period, but the presumptions listed in this paragraph (f) are not applicable, then the Program will presume that the claimant was employed at the mine or for

the mining company for a six-month period, consisting of three months before and three months after the date indicated.

(g) In determining whether a claimant satisfies the employment and exposure criteria of the Act, the Assistant Director shall resolve all reasonable doubt in favor of the claimant. If the Assistant Director concludes that the claimant has not satisfied the employment or exposure requirements of the Act, the claimant or eligible surviving beneficiary will be notified and afforded the opportunity, in accordance with the provisions of § 79.72(c), to submit additional records to establish that the statutory criteria are satisfied.

**§ 79.44 Proof of working level month exposure to radiation.**

(a) If one or more of the sources in § 79.43(a) contain a calculated total of working level months (WLMs) of radiation for the claimant equal to or greater than 40 WLMs, then the Program will presume that total to be correct, absent evidence to the contrary, in which case the claimant or eligible surviving beneficiary need not submit additional records.

(b) If the sources in § 79.43(a) do not contain a calculated total of WLMs of radiation for the claimant, or contain a calculated total that is less than 40 WLMs, a claimant or eligible surviving beneficiary may submit the following records reflecting a calculated number of WLMs of radiation for periods of employment established under § 79.43(c):

(1) Certified copies of records of regulatory agencies of the specified states, provided that the records indicate the mines at which the claimant was employed, the time period of the claimant's employment in each mine, the exposure level in each mine during the claimant's employment, and the calculations on which the claimant's WLMs are based, unless the calculation is apparent;

(2) Certified copies of records of the owner or operator of a uranium mine in the specified states, provided that the records indicate the mines at which the claimant was employed, the time period of the claimant's employment in each mine, the exposure level in each

mine during the claimant's employment, and the calculations on which the claimant's WLMs are based, unless the calculation is apparent.

(c) If the number of WLMs established under paragraphs (a) and (b) of this section is equal to or greater than 40 WLMs of radiation, the claimant or eligible surviving beneficiary need not submit additional records. When the sources referred to in paragraphs (a) and (b) of this section do not establish a calculated number of at least 40 WLMs, the Program will, where possible, calculate additional WLMs in the manner set forth in paragraphs (d) through (g) of this section for the periods of employment for which the sources in paragraphs (a) and (b) do not establish calculated totals. When calculating an exposure level for a particular period of a claimant's employment history, the Program will apply aboveground exposure levels with respect to those periods in which the claimant worked principally aboveground and will apply underground exposure levels with respect to those periods in which the claimant worked principally underground.

(d) To the extent the sources referenced in paragraphs (a) and (b) of this section do not contain a calculated number of WLMs, but do contain annual exposure levels measured in Working Levels (WLs) for mines in which the claimant was employed, the Program will calculate the claimant's exposure to radiation measured in WLMs in the manner set forth in paragraph (h) of this section.

(e) For periods of employment in a uranium mine that a claimant establishes under § 79.43(c) as to which paragraph (d) of this section is not applicable, the Program will, where possible, use any or all of the following sources in computing the annual exposure level measured in WLs in each mine for the period of the claimant's employment, in the manner set forth in paragraph (g) of this section:

(1) Records of the AEC, or its successor agencies;

(2) Records of the PHS, including radiation-level measurements taken in the course of health studies conducted of uranium miners during or including the period 1942–1971;

(3) Records of the United States Bureau of Mines;

(4) Records of regulatory agencies of the specified states; or

(5) Records of the business entity that was the owner or operator of the mine.

(f) For periods of employment in unidentified or misidentified uranium mines that a claimant establishes under § 79.43(c) through (f), the Program will determine annual exposure levels measured in WLs in the unidentified or misidentified mines by calculating an average of the annual exposure levels measured in WLs in all the uranium mines owned or operated by the entities for which the claimant worked during the appropriate time periods and in the identified states.

(g) With respect to periods of employment in a uranium mine that a claimant establishes under § 79.43(c) as to which paragraph (d) of this section is not applicable, and periods of employment in unidentified or misidentified uranium mines that a claimant establishes under § 79.43(c) through (f), the Program will use the following methodology to calculate the annual exposure level measured in WLs for each mine:

(1) If one or more radiation measurements are available for a mine in a given year, such values will be averaged to generate the WLs for the mine for that year.

(2) If radiation measurements exist for the mine, but not for the year in which the claimant was employed in the mine, the WLs for the mine for that year will be estimated if possible as follows:

(i) If annual average measurements exist within four years of the year in which the claimant was employed in the mine, the measurements for the two closest years will be averaged, and that value will be assigned to the year the claimant was employed in the mine;

(ii) If one or more annual average measurements exist for a mine, but are not more than five years from the year the claimant was employed, the annual average closest in time will be assigned either forward or backward in time for two years.

(3) If the methods described in paragraph (g)(2) of this section interpolate or project the annual exposure level measured in WLs for a mine in a year in which the claimant was employed in the mine, the Program will use an estimated average for mines of the same or similar type, ventilation, and ore composition in the same geographical area for that year. An estimated area average will be calculated as follows:

(i) If actual measurements from three or more mines of the same or similar type, ventilation, and ore composition are available from mines in the same locality as the mine in which the claimant was employed, the average of the measurements for the mines within that locality will be used.

(ii) If there are insufficient actual measurements from mines in the same locality to use the method in paragraph (g)(3)(i) of this section, an average of exposure levels in mines in the same mining district will be used.

(iii) If there is no average of exposure levels from mines in the same mining district, the average of exposure levels in mines in the same state will be used.

(iv) If there are insufficient actual measurements from mines in the same state, the estimated average for the State of Colorado for the relevant year will be used.

(4) With respect to a year between 1942 and 1949, if the claimant was employed in a mine for which no exposure levels are available for that year, then the Program will estimate the annual exposure levels measured in WLs by averaging the two earliest exposure levels recorded from that mine after the year 1941. If there are not two exposure levels recorded from that mine, the Program will estimate the WLs by averaging the two earliest exposure levels after the year 1941 from the mines identified according to the methods set forth in paragraphs (g)(3)(i) through (iv).

(h) The Program will calculate a claimant's total exposure to radiation expressed in WLMs, for purposes of establishing eligibility under § 79.42(c), by adding together the WLMs for each period of employment that the claimant has established. For those periods of a claimant's employment for which the Program has obtained or calculated

WLs pursuant to paragraphs (d) through (g) of this section, the Program shall determine WLMs by multiplying the WL by the pertinent time period, measured in months, yielding a claimant's exposure to radiation expressed in WLMs.

(i) In addition to any other material that may be used to substantiate employment history for purposes of determining WLMs, an individual filing a claim may make such a substantiation by means of an affidavit described in § 79.4(c)(4).

**§ 79.45 Proof of primary lung cancer.**

(a) In determining whether a claimant developed primary lung cancer following pertinent employment as a miner, the Assistant Director shall resolve all reasonable doubt in favor of the claimant. A conclusion that a claimant developed primary lung cancer must be supported by medical documentation. To prove that a claimant developed primary lung cancer, the claimant or beneficiary may submit any form of medical documentation specified in paragraph (e) of this section. In all cases, the Program will review submitted medical documentation, and will, in addition and where appropriate, review any pertinent records discovered within the sources identified in paragraphs (b), (c), and (d) of this section.

(b) Where appropriate, the Radiation Exposure Compensation Program will search the records of the PHS (including NIOSH), created or gathered during the course of any health study of uranium workers conducted or being conducted by these agencies, to determine whether those records contain proof of the claimant's medical condition. (In cases where the claimant is deceased, the Program will accept as proof of medical condition the verification of the PHS or NIOSH that it possesses medical records or abstracts of medical records of the claimant that contain a verified diagnosis of primary lung cancer.)

(c) If a claimant was diagnosed as having primary lung cancer in Arizona, Colorado, Nevada, New Mexico, Utah, or Wyoming, and the claimant or eligible surviving beneficiary submits with the claim an Authorization To Release